

***FlyBy Math™* Alignment**
To the Supplement to the Massachusetts Mathematics Curriculum Framework
Grade-Level Standards, May 2004

Number Sense and Operations Strand

Students engage in problem solving, communicating, reasoning, connecting, and representing as they:

Grade-Level Standard	<i>FlyBy Math™</i> Activities
7.N.2 Use ratios and proportions in the solution of problems involving unit rates, scale drawings, and reading of maps.	<p>--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.</p> <p>--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.</p> <p>--Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.</p>

Patterns, Relations, and Algebra Strand

Students engage in problem solving, communicating, reasoning, connecting, and representing as they:

Grade-Level Standard	<i>FlyBy Math™</i> Activities
7.P.1 Extend, represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic expressions. Include arithmetic and geometric progressions, e.g., compounding.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.
7.P.3 Create and use symbolic expressions for linear relationships and relate them to verbal, tabular, and graphical representations.	--Represent distance, speed, and time relationships for constant speed cases using tables, bar graphs, line graphs, equations, and a Cartesian coordinate system.
7.P.6 Use linear equations to model and analyze problems involving proportional relationships. Use technology as appropriate.	--Represent distance, speed, and time relationships for constant speed cases using linear equations, and a Cartesian coordinate system.

Geometry Strand

Students engage in problem solving, communicating, reasoning, connecting, and representing as they:

Grade-Level Standard	<i>FlyBy Math™</i> Activities
7.G.4 Graph points and identify coordinates of points on the Cartesian coordinate plane (all four quadrants).	--Plot points on a schematic of a jet route, on a vertical line graph, and on a Cartesian coordinate system to describe the motion of two airplanes.

Measurement Strand

Students engage in problem solving, communicating, reasoning, connecting, and representing as they:

Grade-Level Standard

7.M.1 Select, convert (within the same system of measurement), and use appropriate units of measurement or scale.

FlyBy Math™ Activities

--Calculate and measure the position and time of simulated aircraft. Represent that motion using tables, graphs, equations, and experimentation.

Data Analysis, Statistics, and Probability Strand

Students engage in problem solving, communicating, reasoning, connecting, and representing as they:

Grade-Level Standard

7.D.1 Select, create, interpret, and utilize the following tabular and graphical representations of data: circle graphs, Venn diagrams, stem-and-leaf plots, tables, and charts.

FlyBy Math™ Activities

--Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.